CHILTON'S
NOVEMBER 1990

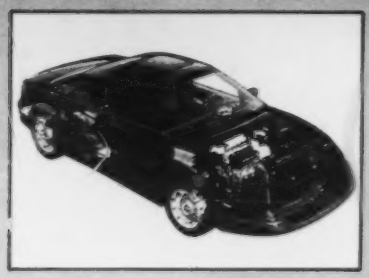
AUTOMOTIVE INDUSTRIES

THE PEOPLE — THE PRODUCT — THE PROCESS

DIE CHANGE

5th ANNUAL DIE CHANGE CHALLENGE

INSIDE HONDA R&D



URN!
THE CARS

**********3-DIGIT 208
0107795257&CE
JOS MCNALLY SRI ACO EDITO 5
CONGRESSIONAL INFO SE OCT91
SUITE 800
4520 EAST WEST HWY
BETHESDA MD 20814

Volume 170, No. 11 November 1990

The presses were rockin' across America in the 5th annual Die Change Challenge. Page 47.

CHILTON'S
AUTOMOTIVE INDUSTRIES

COVER STORY

1990 Die Change Challenge 43
Our annual competition hits the five-year mark.

DEPARTMENTS

5 Editorial
9 Harbour
11 Keller
17 Newsline
26 Marketdata
29 Strictly Business
30 Cars Worth Noting
119 Reader Sound Off
121 Letters
123 Windecker

AUTOMOTIVE INDUSTRIES (ISSN 0273-656x) magazine is published monthly by Chilton Co., Chilton Way, Radnor, PA 19089. Chilton Company is a division of Capital Cities/ABC, Inc., New York, NY. Subscription rates: 1 yr. $49.95 US, $100.00 foreign. Phone (215) 964-4152. Second Class Postage paid at Wayne, PA 19087 and additional mailing offices. POSTMASTER: Send address changes to AUTOMOTIVE INDUSTRIES, Circulation Dept., Chilton Way, Radnor, PA 19089. Permission to photocopy for internal use or the internal use of specific clients is granted by Chilton Company for libraries and other users registered with the Copyright Clearance Center (CCC), provided that a base fee of $1.00 per copy of the article, plus 25¢ per page is paid to the CCC, 21 Congress St., Salem, MA 01970. Address special requests to The Editor. (0273-656x/85 $1.00 ☆ 25¢)

CHILTON COMPANY
ONE OF THE
CAPITAL CITIES/
ABC PUBLISHING COMPANIES
DIVERSIFIED PUBLISHING GROUP
ROBERT G. BURTON
PRESIDENT

FEATURES

In Orbit 56
It's time to sell the cars.

Thanks for the (Design) Memories 71
We go inside Honda R&D.

Let The Buyouts Begin 76
GM and UAW reach an amenable agreement.

The Bubble Has Burst 79
Korea's auto industry stumbles.

Cut-Rate Audi 82
A blown Legacy sedan? Why not?

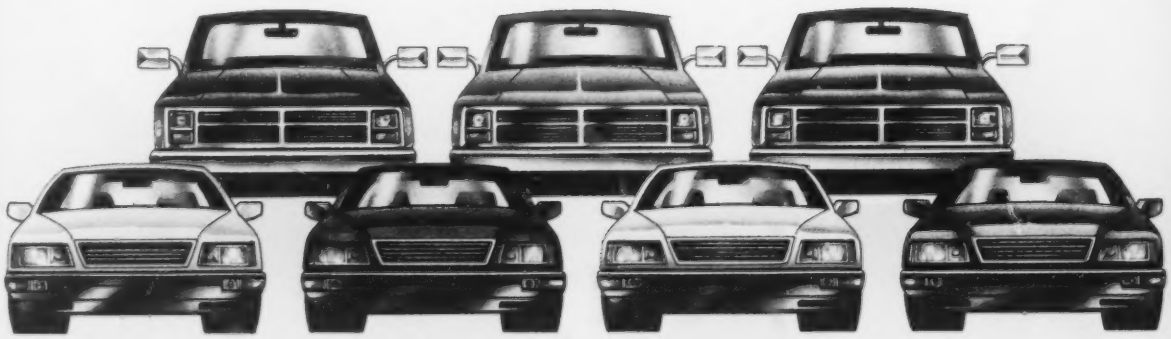
Staying the Course 85
GM purchasing gurus say they buy American.

Automaker Quarterly Report 89
Third quarter numbers, hot off the spreadsheet.

TECH TOPICS

1991 Buyers Guide 93
A concise compilation of cybernetic suppliers.

1991 Passenger Cars & Light Trucks Sold in the U.S.



a special presentation sponsored by...

ARCO Chemical

TWO SEATERS

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES
Acura NS-X	NS-X	Tochigi, Japan	(N/A)	—	3,000
Alfa Romeo Spider	N/A	Turin, Italy	40,000	1,856	1,900
Aston Martin Virage	2034	Newport Pagnell, UK	300	34	50
Buick Reatta	Z	Lansing, MI	24,000	7,905	7,500
Cadillac Allante	V	Turin, Italy/ Hamtramck, MI	10,000	3,276	3,500
Chevrolet Corvette	Y	Bowling Green, KY	57,600	23,928	24,500
Chrysler's TC by Maserati	Q	Lambrate, Italy	40,000	2,924	4,300
Consulier GTP	N/A	Riviera Beach, FL	5,000	N/A	N/A
Ferrari: 348	N/A	Modena & Maranello, Italy	4,000	2,200	N/A
Testarossa	N/A	" "	4,000	1,200	N/A
F40	N/A	" "	4,000	400	N/A
Honda Civic CRX	N/A	Suzuka, Japan	(N/A)	31,011	40,000
Jaguar XJS	XJ27/77	Coventry, UK	80,000	4,458	4,700
Lamborghini Diablo/ Countach	P132	Sant' Agata Bolognese, Italy	2,000	N/A	180
Lotus: Elan	M100	Norwich, UK	5,000	N/A	75
Esprit Turbo	M200	" "	5,000	N/A	270
Maserati Spider	333B28	Modena, Italy	6,000	N/A	N/A
Mazda: Miata	N/A	Hiroshima, Japan	(N/A)	23,007	38,000
RX-7	N/A	" "	(N/A)	16,294	10,700
Mercedes 300/500 SL	R129	Bremen, Ger.	230,000	7,477	7,000
Nissan 300ZX	N/A	Shatai, Japan	(N/A)	20,369	22,000
Toyota MR2	N/A	Kariya, Japan	(N/A)	5,205	15,000

MINICOMPACTS

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES
BMW 850i	E31	Dingolfing, Ger.	264,000	—	50
Ferrari Mondial t	N/A	Modena & Maranello, Italy	4,000	400	N/A
Maserati 228	334B28	Modena, Italy	6,000	2,000	N/A
Nissan 240 SX	N/A	Kyushu, Japan	(N/A)	68,213	53,000
Porsche 911 Carrera	964	Stuttgart, Ger.	30,000	5,714	5,400
928	928	" "	30,000	835	650
944	944	Nekersulm, Ger.	180,000	2,794	3,000
VW Cabriolet	N/A	Osnabruck, Ger.	95,000	9,891	7,700

SUBCOMPACTS

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES
Acura Integra	N/A	Suzuka, Japan	(N/A)	77,433	81,500
Audi Coupe Quattro	N/A	Ingolstadt, Ger.	330,000	342	870
80/90	B3	" "	330,000	9,013	9,300
BMW 3-Series	E30	Regensberg, Ger. Munich, Ger.	135,000 200,000	31,174	30,000
Chevrolet Camaro	F	Van Nuys, CA	199,680	95,469	80,000
Daihatsu: Charade	N/A	Kyoto, Japan	(N/A)	15,118	12,400
Applause	N/A	" "	(N/A)	—	500
Dodge: Daytona	G24	Fenton, MO	210,000	64,097	36,700
Stealth	N/A	Okazaki, Japan	(N/A)	—	500
Dodge/Plymouth Colt	N/A	Kurashiki, Japan	(N/A)	58,299	44,200
Eagle: Talon	H24S	Bloomington-Normal, IL	240,000	7,145	26,000
Summit	N/A	" "	240,000	19,121	14,000
Ford Festiva	BT17	Seoul, South Korea	(N/A)	69,328	57,500
Mustang	FOX	Dearborn, MI	176,640	161,148	121,300
GEO: Metro	M	Kosai, Japan	(N/A)	53,437	72,000
Prizm	S	Fremont, CA	240,000	89,710	122,300
Storm	R	Fujisawa, Japan	(N/A)	62,877	83,400
Honda: Civic	N/A	East Liberty, OH Marysville, OH Alliston, Ontario Suzuka, Japan	150,000 360,000 80,000 657,000	204,441	213,000
Prelude	N/A	Sayami, Japan	533,000	42,882	38,400
Hyundai Excel	X2	Ulsan, S. Korea	(N/A)	142,563	105,000
Infiniti M30	N/A	Oppama, Japan	(N/A)	657	6,200
Isuzu Impulse	N/A	Fujisawa, Japan	(N/A)	3,875	1,800
Maserati 430	332B28	Modena, Italy	6,000	N/A	N/A
Mercedes 190	W201	Sindelfingen, Ger. Bremen, Ger.	405,000 230,000	14,503	12,900
Mercury Capri	SA30	Broadmeadows, Australia	(N/A)	—	8,500
Mitsubishi: Eclipse	H24S	Bloomington-Normal, IL	240,000	32,018	47,500
Mirage	N/A	" " Kurashiki, Japan	240,000 (N/A)	28,796	52,000
3000 GT	N/A	Okazaki, Japan	(N/A)	—	600
Nissan: NX Coupe	N/A	Tochigi, Japan	(N/A)	23,909	7,400
Sentra	N/A	Zama, Japan Smyrna, TN	(N/A) 240,000	221,292	166,700
Plymouth Laser	H24S	Bloomington-Normal, IL	240,000	21,098	39,000
Pontiac Firebird	F	Van Nuys, CA	199,680	55,030	38,500
Rolls Royce Bentley Continental	N/A	Crewe, UK	5,000	N/A	N/A
Cornich III	N/A	" "	5,000	N/A	N/A
Subaru: Justy	N/A	Gunma, Japan Kaoshiung, Taiwan	141,600 42,000	17,792	15,000
XT	N/A	Gunma, Japan	279,600	11,088	2,500
Suzuki Swift	N/A	Ingersoll, Ont. Kosai, Japan	200,000 (N/A)	6,009	7,000

1991 Passenger Cars &

COMPACTS

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES
Acura Legend	HX	Sayama, Japan	533,000	64,638	59,000
BMW 5-Series	E34	Dingolfing, Ger.	264,000	20,492	21,500
Buick Skylark	N	Lansing, MI	230,400	63,725	86,000
Chevrolet:					
Corsica/Beretta	L	Linden, NJ	230,400	326,006	279,000
		Wilmington, DE	230,400		
Cavalier	J	Janesville, WI	230,400	295,715	277,500
		Lordstown, OH	273,600		
Chrysler LeBaron	J	Fenton, MO	210,000	83,965	62,300
Dodge Shadow	P	Sterling Heights, MI	230,400	82,953	70,000
Ford: Escort	CT20	Wayne, MI	264,960	333,535	263,000
		Hermosillo, Mexico	172,800		
Probe	ST16	Flat Rock, MI	260,000	133,650	131,500
Tempo	Topaz	Kansas City, MO	211,200	228,426	225,000
		Oakville, Ont.	230,400		
Honda Accord	N/A	Marysville, OH	360,000	362,707	425,000
		Sayama, Japan	533,000		
Isuzu I-Mark (Stylus)	N/A	Fujisawa, Japan	(N/A)	12,421	2,700
Jaguar XJ-6	XJ40	Coventry, UK	80,000	14,509	13,800
Lexus ES250	N/A	Tsutsumi, Japan	(N/A)	4,728	18,500
Mazda: 323	N/A	Hiroshima, Japan	(N/A)	61,037	24,000
Protege	N/A	" "	(N/A)	9,935	45,500
Mercedes:					
300	W124	Sindelfingen, Ger.	405,000	26,243	30,800
560SEC	W126	" "	405,000	1,702	1,900
Mercury: Topaz	Topaz	Kansas City, MO	211,200	85,732	75,000
		Oakville, Ont.	230,400		
Tracer	CT20	Hermosillo, Mexico	172,800	57,966	29,000
Mitsubishi:					
Galant	N/A	Nagoya, Japan	(N/A)	30,511	41,000
Sigma	N/A	" "	(N/A)	2,100	1,900
Nissan Stanza	N/A	Oppama, Japan	(N/A)	42,736	74,800
Olds Cutlass					
Calais	N	Lansing, MI	230,400	95,254	100,000
Peugeot 405	D60	Ryton, UK	110,000	3,825	3,100
		Sochaux, France	400,000		
Plymouth					
Sundance	P	Sterling Heights, MI	230,400	84,335	61,100
Pontiac:					
Grand Am	N	Lansing, MI	230,400	202,815	209,000
LeMans	T	Inchon, S. Korea	(N/A)	44,641	41,000
Sunbird	J	Lordstown, OH	273,600	101,991	107,500
Saab 900	N/A	Trollhattan, Sweden	120,000	22,471	19,800
		Uusikaupunki, Finland	(N/A)		
Sterling 827	XX	Cowley, UK	110,000	5,907	4,400
Subaru: Legacy	N/A	Gunma, Japan	279,600	33,707	69,000
		Lafayette, IN	60,000		
Loyale	N/A	Gunma, Japan	279,600	12,200	20,500
Toyota: Camry	N/A	Georgetown, KY	240,000	259,176	265,300
		Tsutsumi, Japan	(N/A)		
Cressida	N/A	Motomachi, Japan	(N/A)	23,934	12,500
Volkswagen:					
Golf	A3	Wolfsburg, Ger.	900,000	22,247	18,200
		Forest, Belgium	210,000		
Jetta	N/A	Wolfsburg, Ger.	900,000	55,504	59,000
Volvo: 240	N/A	Goteborg-Torslanda, Sweden	150,000	40,881	33,600
		Ghent, Belgium	95,000		
780	N/A	Turin, Italy	40,000	2,057	1,000

MIDSIZE

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES
Alfa 164	Type 4	Arese, Italy	150,000	—	960
Avanti	N/A	Youngstown, OH	1,500	300	300
Audi: V8	D2	Neckarsulm, Ger.	180,000	918	1,800
100/200	C4	" "	180,000	8,473	10,200
BMW 7-Series	E32	Dingolfing, Ger.	264,000	10,399	8,600
Buick: Century	A	Oklahoma City, OK	288,000	134,682	114,000
Regal	W	Oshawa 2, Ont.	261,120	76,003	78,500
Riviera	E	Hamtramck, MI	240,000	19,208	20,300
Cadillac:					
Eldorado	E	Hamtramck, MI	240,000	30,051	23,000
Seville	K	" "	240,000	23,030	35,500
Chevrolet:					
Lumina	W	Oshawa 1/2, Ont.	460,000	109,705	229,000
Celebrity	A	Ste. Therese, Quebec	160,080	141,796	39,100
Chrysler:					
LeBaron	A	Newark, DE	230,400	—	65,000
New Yorker	C	Belvedere, IL	226,560	70,756	45,800
Dodge: Dynasty	C	" "	226,560	109,250	90,500
Spirit	A	Newark, DE	230,400	76,558	83,000
Ford: Taurus	DN5	Atlanta, GA	249,600	348,061	312,000
		Chicago, IL	249,600		
Thunderbird	MN12	Lorain, OH	299,520	120,645	105,500
Hyundai Sonata	Y2	Bromont, Quebec	100,000	34,698	31,600
		Ulsan, S. Korea	(N/A)		
Infiniti Q45	N/A	Tochigi, Japan	(N/A)	1,072	10,600
Lexus LS400	N/A	Tahara, Japan	(N/A)	11,574	37,400
Lincoln Mark VII	LS	Wixom, MI	184,320	24,620	21,200
Mercury: Cougar	MN12	Lorain, OH	299,520	99,673	78,000
Sable	DN5	Atlanta, GA	249,600	110,962	98,500
		Chicago, IL	249,600		
Maserati 228	334B28	Modena, Italy	6,000	N/A	N/A
Mazda: 626	N/A	Flat Rock, MI	260,000	55,044	63,400
929	N/A	Hiroshima, Japan	(N/A)	19,390	16,500
MX-6	N/A	Hofu, Japan	(N/A)	41,532	29,600
		Flat Rock, MI	260,000		
Mercedes:					
300 SEL	W126	Sindelfingen, Ger.	405,000	3,822	5,900
350 SDL Turbo	W126	" "	405,000	2	830
420 SEL	W126	" "	405,000	7,493	7,000
560 SEL	W126	" "	405,000	5,460	5,000
Nissan Maxima	N/A	Oppama, Japan	(N/A)	109,429	98,500
Olds:					
Cutlass:					
Ciera	A	Oklahoma City, OK	288,000	190,720	128,000
		Ste. Therese, Quebec	160,080		
Supreme	W	Doraville, GA	250,000	99,898	96,000
Cruiser	A	Oklahoma City, OK	(N/A)	N/A	N/A
Toronado	E	Hamtramck, MI	240,000	10,125	15,800

Light Trucks Sold in the U

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES
Plymouth					
Acclaim	A	Newark, DE	230,400	92,017	99,900
Pontiac:					
6000	A	Oklahoma City, OK	288,000	67,681	46,500
Grand Prix	W	Fairfax, KS	250,000	113,216	112,000
Rolls Royce:					
Bentley Eight	N/A	Crewe, UK	5,000		
Bentley Mulsane	N/A	" "	5,000	1,216	1,300
Silver Spirit II	N/A	" "	5,000		
Silver Spur	N/A	" "	5,000		
Volkswagen					
Passat	B3	Emden, Germany	264,000	—	2,000
		Brussels, Belgium	210,000		
Volvo: 740	N/A	Goteborg-Torslanda	150,000		
		Uddevalla, Sweden	40,000	47,098	49,000
		Ghent, Belgium	95,000		
		Halifax, N. Scotia	10,000		
760	N/A	Kalmar, Sweden	35,000	11,811	8,700

LARGE

Buick:					
Electra/ Park Avenue	C	Wentzville, MO	249,600	77,621	55,000
Le Sabre	H	Flint, MI	192,000	147,321	143,000
Estate Wagon	B	Lakewood, GA	(N/A)	N/A	6,800
		Willow Run, MI	240,000		
Cadillac:					
Brougham	D	Arlington, TX	230,400	39,858	32,500
DeVille/ Fleetwood	C	Orion, MI	240,000	170,459	153,000
Chevrolet					
Caprice	B	Arlington, TX	230,400	148,823	160,000
		Willow Run, MI	240,000		
Chrysler:					
New Yorker	C	Belvedere, IL	226,560	47,405	46,300
Fifth Avenue	Y	" "	226,560	12,336	35,000
Imperial	Y	" "	226,560	2,226	10,500
Dodge Monaco	B	Bramalea, Ont.	153,600	—	7,600
Eagle Premier	B	Bramalea, Ont.	153,600	39,546	20,000
Ford LTD					
Crown Victoria	Panther	St. Thomas, Ont.	230,400	108,085	103,000
Lincoln:					
Continential	FN9	Wixom, MI	184,320	56,441	59,000
Town Car	FN36	" "	184,320	119,254	138,500
Mercury Grand					
Marquis	Panther	St. Thomas, Ont.	230,400	111,575	97,000
Olds: 88	H	Flint, MI	192,000	138,357	102,000
		Wentzville, MO	249,600		
98	C	Wentzville, MO	249,600	65,671	54,000
		Orion, MI	230,400		
Custom Cruiser	B	Willow Run, MI	240,000	N/A	3,700
		Arlington, TX	230,400		
Peugeot: 505	E30	Sochaux, France	400,000	2,270	1,400
605	Z6	" "	400,000	—	N/A
Pontiac					
Bonneville	H	Wentzville, MO	249,600	87,642	65,600
Saab 9000	Type 4	Trollhatten, Sweden	120,000	8,835	8,700
		Malmo, Sweden	60,000		

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES

SPORT/UTILITY

Chevrolet:					
Blazer	N/A	Flint, MI	192,000	22,816	19,000
Suburban	N/A	" "	192,000	65,425	59,100
S-10 Blazer	N/A	Pontiac, MI	115,200	177,819	156,000
		Shreveport, LA	190,080		
		Moraine, OH	215,040		
Daihatsu Rocky	N/A	Osaka, Japan	(N/A)	295	4,000
Dodge:					
Raider	N/A	Nagoya, Japan	(N/A)	9,450	3,600
Ramcharger	N/A	Warren, MI	215,040	18,973	12,500
		Lago Alberto, Mexico	(N/A)		
Ford:					
Bronco	N/A	Wayne, MI	142,080	62,563	54,500
Explorer/ Bronco II	N/A	Louisville, KY	307,200	108,990	149,000
GEO Tracker	N/A	Ingersoll, Ont.	200,000	11,461	30,000
		Kosai, Japan	(N/A)		
GMC:					
Suburban	N/A	Flint, MI	192,000	23,651	24,600
Jimmy	N/A	" "	192,000	6,723	5,500
S-15 Jimmy	N/A	Moraine, OH	215,040	44,850	42,000
		Pontiac, MI	115,200		
		Shreveport, LA	190,080		
Isuzu:					
Amigo	N/A	Fujisawa, Japan	(N/A)	6,318	9,800
Trooper	N/A	" "	(N/A)	50,079	47,500
Rodeo	N/A	Lafayette, IN	120,000	—	600
Jeep:					
Cherokee	XJ	Toledo, OH	240,000	156,118	126,000
Wagoneer	XJ	" "	240,000	6,537	4,000
Grand Wagoneer	N/A	" "	240,000	10,715	7,600
Wrangler	YJ	Brampton, Ont.	81,600	50,726	52,300
LaForza	N/A	Turin, Italy	40,000	145	200
Mitsubishi					
Montero	N/A	Nagoya, Japan	(N/A)	14,118	16,000
Nissan					
Pathfinder	N/A	Kyushu, Japan	(N/A)	17,012	26,100
Olds Bravada	N/A	Moraine, OH	215,040	—	400
Range Rover	N/A	Solihull, UK	110,000	4,822	4,600
Suzuki:					
Samurai	N/A	Kosai, Japan	(N/A)	5,038	5,000
Sidekick	N/A	Ingersoll, Ont.	200,000	19,131	10,200
		Kosai, Japan	(N/A)		
Toyota:					
Land Cruiser	N/A	Tahara, Japan	(N/A)	5,091	5,200
4 Runner	N/A	" "	(N/A)	44,644	52,000

MINIVAN

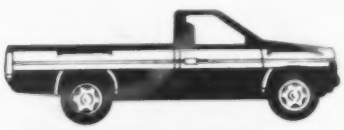
Chevrolet:					
Astro	N/A	Baltimore, MD	199,920	143,941	124,500
Lumina APV	U	Tarrytown, NY	253,440	9,708	61,500

Developed by the Editors of Automotive Industries in cooperation with ARCO Chemical. Special Thanks to MIRU (Motor Industry Research Unit) and Automotive Integrated Resources' Fast Track News for their assistance in this project.

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES
Chrysler Town & Country	T115	Fenton, MO	210,000	1,812	3,000
Dodge Caravan	T115	Windsor, Ontario Fenton, MO	249,600 210,000	219,575	220,000
Ford Aerostar	N/A	St. Louis, MO	199,920	188,130	180,000
GMC Safari	N/A	Baltimore, MD	199,920	31,681	33,200
Mazda MPV	N/A	Hiroshima, Japan	(N/A)	37,211	41,500
Mitsubishi Van	N/A	Nagoya, Japan	(N/A)	910	1,900
Olds Silhouette	U	Tarrytown, NY	253,440	2,122	20,500
Pontiac Trans Sport	U	Tarrytown, NY	253,440	3,266	27,000
Plymouth Voyager	T115	Windsor, Ont. Fenton, MO	249,600 210,000	184,943	180,000
Toyota Previa	N/A	Kariya, Japan	(N/A)	—	15,000
Volkswagen Vanagon	N/A	Hannover, Ger.	(N/A)	5,147	6,700

SMALL PICK UP TRUCKS

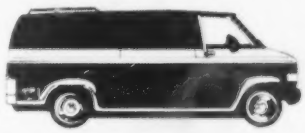
Chevrolet S10	N/A	Moraine, OH Shreveport, LA Pontiac West, MI	215,040 190,080 115,200	228,691	200,000
Dodge Ram 50	N/A	Nagoya, Japan	(N/A)	28,967	14,500
Ford Ranger	N/A	Louisville, KY Twin Cities, MN Edison, NY	307,200 165,120 215,040	284,125	286,000
GMC S15 Sonoma	N/A	Moraine, OH Shreveport, LA Pontiac West, MI	215,040 190,080 115,200	52,601	46,000
Isuzu Pickup	N/A	Lafayette, IN	120,000	46,976	44,300
Mitsubishi Pickup	N/A	Nagoya, Japan	(N/A)	22,135	22,700
Nissan Hardbody	N/A	Smyrna, TN	240,000	132,624	130,000



STANDARD PICKUPS

Chevrolet C/K	GMT400	Fort Wayne, IN Pontiac, MI Oshawa, Ont.	230,400 230,400 230,400	482,922	495,000
Dodge					
Power Ram 50	N/A	Nagoya, Japan	(N/A)	90,302	12,000
Dakota	N/A	Warren, MI	215,040	89,294	78,000
D/W100-250	T300	" "	215,040	24,055	97,500
Ford F Series	N/A	Kansas City, MO Wayne, MI Norfolk, VA Twin Cities, MN Oakville, Ont.	145,920 142,080 157,440 165,120 145,920	366,387	545,000
GMC C/K	GMT400	Fort Wayne, IN Pontiac, MI Oshawa, Ont.	230,400 230,400 230,400	148,715	144,000

MODEL	CODE	PLANT LOCATION	PLANT CAPACITY	1989 SALES	EST. 1990 SALES
Isuzu Pickup	N/A	Lafayette, IN Fujisawa, Japan	120,000 (N/A)	46,975	44,500
Jeep Comanche	N/A	Toledo, OH	240,000	25,074	16,000
Mazda B2200-2600	N/A	Hiroshima, Japan	(N/A)	73,492	76,000
Mitsubishi 4WD	N/A	Nagoya, Japan	(N/A)	1,544	3,000
Toyota Pickup	N/A	Tahara, Japan	(N/A)	222,813	180,500



VANS

Chevrolet	G	Lordstown, OH Scarborough, Ont.	115,200 110,160	114,999	116,000
Dodge Ram	N/A	Pillette Road Windsor, Ont.	115,200 249,600	67,812	82,000
Ford Econoline	N/A	Lorain, OH	218,880	166,233	177,000
GMC	G	Lordstown, OH Scarborough, Ont.	115,200 110,160	40,534	38,000

ARCO Chemical Worldwide Locations

NORTH AMERICA

SOUTHFIELD, MI 48034
Suite 216
400 Galleria Officentre
313-353-6730

SCARBOROUGH ONTARIO M1H 3E3 CANADA
Suite 306
100 Consilium Place
416-296-9864

NEWTOWN SQUARE, PA 19073
Headquarters, Research & Engineering Center
3801 West Chester Pike
Newtown Square, PA 19073
1-800-345-0252

INTERNATIONAL

DUSSELDORF, GERMANY
Roland Strasse 44
D/4000 Dusseldorf 30
49-211-434274

MAIDENHEAD, BERKSHIRE SL61YP, ENGLAND
ARCO Chemical House
Bridge Avenue
44-628-775000

VILLERS ST. PAUL, FRANCE
European Technical Center
33-442-96300

TOKYO, 105 JAPAN
Toranomon 37 Mori Bldg. 5th Floor
3-5-1 Toranomon
Minato-Ku
81-3-434-6191

a special presentation by...

ARCO Chemical

AUTOMAKER QUARTERLY REPORT

by DR. THOMAS O'GRADY

With skyrocketing gasoline prices and renewed fears of a recession, US passenger car sales dropped by 10.3% in the third quarter of 1990 in comparison to the same period last year.

Integrated Automotive Resources' consumer survey, Automotive CPR, was conducted immediately following the August 2nd invasion of Kuwait by Iraq and revealed that a large number of buyers would postpone their purchase decisions for several reasons stemming from uncertainty. Few buyers, however, were willing to sacrifice their present level of engine performance because of gas price increases.

General Motors was the only Big Three automaker to eke out an increase in its passenger car market share. In the third quarter of 1990, GM captured a 35.5% share, up from 35.3% in 1989. Honda was able to surpass Chrysler in passenger car sales by 15,521 units this quarter. In addition, Toyota's car sales – not including minivans and sport utility vehicles – came within 3514 units of Chrysler's car sales for the quarter. But Chrysler still significantly maintains the lead over both in total vehicle sales.

Recession-wary consumers are postponing new car purchases, but those that do buy are not willing to sacrifice engine performance because of gas prices.

After an impressive comeback last year, Nissan's sales this quarter slipped by 10.3%. Mitsubishi dropped out of the top ten manufacturers as it prepares to debut several new products on the US market. Volkswagen/Audi moved ahead of Hyundai and Subaru in car sales this quarter.

When car sales were examined by geographic base, we found that American, Japanese and "other" imports lost share while the transplants continued to gain. Traditional American share of the passenger car market fell from 60.9% in the third quarter of 1989 to 57.4% in the third quarter of 1990. Japanese imports' share fell from 20% to 18% over the same time period, but transplants rose from 1.4% to 16.8% of the total market.

Detailed automotive sales and production data is available from *Fast Track News*. Call 215-687-1559.

Dr. Thomas O'Grady is president and chief analyst of Integrated Automotive Resources in Wayne, PA, and publisher of Fast Track News.

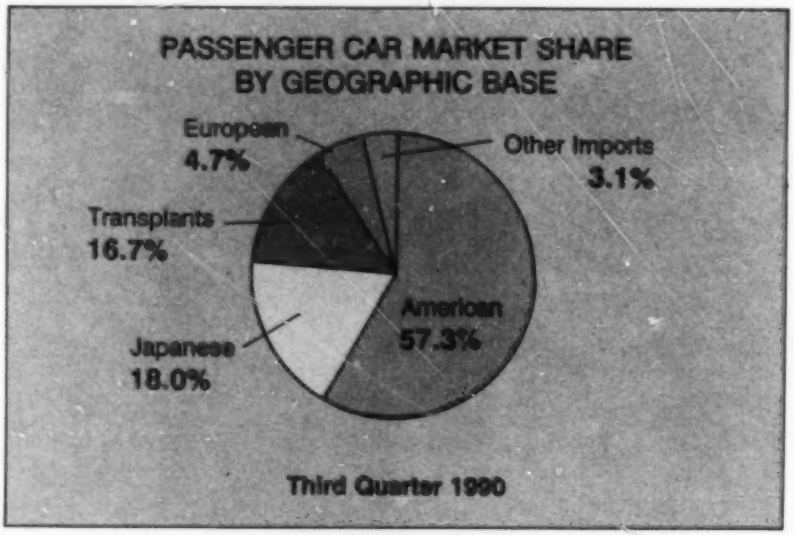
WHAT'S HOT!
Domestic Auto Sales
3rd Quarter 1990

Carline	'90	'89	% Change
Accord*	114,257	96,907	17.90%
Camry*	78,531	73,957	6.18%
Escort	74,491	98,767	-24.58%
Taurus	74,365	87,087	-14.61%
Cavalier	71,748	76,010	- 5.61%
Corsica/ Beretta	69,406	80,572	-13.86%
Civic*	60,558	52,906	14.46%
Corolla*	57,358	56,747	1.08%
Tempo	55,289	53,729	2.90%
Lumina	52,976	37,384	41.71%

* – Includes imports

US Passenger Car Market Shares
3rd Quarter, 1990

Manufacturer	'90 Sales	% Total	'89 Sales	% Total	% Change
General Motors	837,240	35.53%	928,037	35.33%	-9.78%
Ford	489,434	20.77%	586,327	22.32%	-16.53%
Honda/Acura	221,692	9.41%	209,518	7.98%	5.81%
Chrysler	206,171	8.75%	263,127	10.02%	-21.65%
Toyota/Lexus	202,657	8.60%	190,001	7.23%	6.66%
Nissan/Infiniti	122,202	5.19%	136,174	5.18%	-10.26%
Mazda	61,368	2.60%	63,116	2.40%	-2.77%
VW/Audi	40,525	1.72%	36,786	1.40%	10.16%
Hyundai	33,853	1.44%	47,752	1.82%	-29.11%
Subaru	32,223	1.37%	37,451	1.43%	-13.96%
TOTAL CARS	2,356,211	100%	2,626,823	100%	-8.18%



Passenger Car Market Share By Geographic Base

Third Quarter 1990

Manufacturers	Total Sales	Total Market Share
American	1,351,257	57.35%
Japanese	424,607	18.02%
European	112,056	4.76%
Transplants	395,049	16.77%
Other Imports	73,242	3.11%
Total Cars	2,356,211	100.00%

3RD QUARTER 1990 DOMESTIC LIGHT TRUCK PRODUCTION*

COMPANY	FULL-SIZE TRUCKS	COMPACT TRUCKS	FULL-SIZE VANS	COMPACT VANS	FULL-SIZE SPORTS UTILITY	COMPACT SPORTS UTILITY	TOTAL 1Q '90	TOTAL 1Q '89
FORD	132,663	59,230	38,219	52,519	10,643	62,064	355,338	300,798
CHEVROLET	130,697[1]	48,609	21,628	50,848	28,061	41,780	321,823	336,956
GMC	35,588[1]	11,980	7,986	11,694	11,423	13,503	92,174	107,677
CHRYSLER/ DODGE	24,520	16,439	15,802	41,085	—	—	97,854	155,247
JEEP	—	2,306	—	—	1,489	41,475	45,270	70,881
NISSAN	—	27,830	—	—	—	—	27,830	25,965
OLDS	—	—	—	5,633	—	—	5,633	737
PONTIAC	—	—	—	7,640	—	—	7,640	1,398
ISUZU	—	4,531	—	—	—	6,769	11,300	990

[1]Includes Suburban and P-model. *Built in the US and Canada.